

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 02/07299

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K31/28 A61K31/30 A61K31/315 A61K31/295 C07F1/08  
 C07F3/06 C07F15/04 C07F15/06 C07F15/02 C07F13/00  
 C07F11/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K C07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

CHEM ABS Data, EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 110 529 A (VAARTSTRA BRIAN A ET AL) 29 August 2000 (2000-08-29) claims	1-3,7-9
X	TEMBE G L ET AL: "Manganese(II) beta-diketonate catalysed oxidation of cyclohexane by tert-butyl hydroperoxide" REACTION KINETICS AND CATALYSIS LETTERS, ELSEVIER, AMSTERDAM, NL, vol. 63, no. 2, 1998, pages 385-389, XP001106905 ISSN: 0133-1736 table 1	1-3,7-9
X	US 5 225 561 A (BROWN DUNCAN W ET AL) 6 July 1993 (1993-07-06) tables V,VI -/-	1-4,7-9

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

24 October 2002

Date of mailing of the international search report

12/11/2002

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>NATARAJAN C ET AL: "Synthesis, spectral studies and reactivity of nickel(II), copper(II) and zinc(II) mixed ligand complexes with 2-formyl, 2-acetyl and 2-benzoyl- cyclohexanones and acetylacetone"</p> <p>SYNTHESIS AND REACTIVITY IN INORGANIC AND METALLORGANIC CHEMISTRY, MARCEL DEKKER INCORPORATED, NEW YORK, US, vol. 22, no. 6, 1992, pages 827-849, XP001106127</p> <p>ISSN: 0094-5714</p> <p>table 1</p>	1-3,7-9
X	<p>BENNETT, ALISON M. A. ET AL: "The IR and proton, carbon-13 NMR spectra of the nickel(II), copper (II) and zinc(II) complexes of 2,4-pentanedione, 4-imino-2-pentanone, 4-thioxo-2-pentanone and 2,4-pentanedithione: a comparative study"</p> <p>POLYHEDRON, PERGAMON PRESS, OXFORD, GB, vol. 8, no. 18, 1989, pages 2305-2311, XP001106503</p> <p>ISSN: 0277-5387</p> <p>Zn(acac)2(H2O)</p>	1-3,7-9
X	<p>US 4 814 391 A (COLBORN ROBERT E)</p> <p>21 March 1989 (1989-03-21)</p> <p>example 1</p>	1-3,7-9
X	<p>SUCH K P ET AL: "E.P.R. of Mn(2+) in acetylacetonates"</p> <p>MOLECULAR PHYSICS, LONDON, GB, vol. 60, no. 3, 1987, pages 553-560, XP001106702</p> <p>table 1</p>	1-3,7-9
X	<p>KIRSTE, BURKHARD ET AL: "ENDOR study of bis(acetylacetonato) copper (II) in solid solution"</p> <p>JOURNAL OF PHYSICAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY, US, vol. 87, no. 5, 3 March 1983 (1983-03-03), pages 781-788, XP001105567</p> <p>ISSN: 0022-3654</p> <p>abstract</p>	1-3,7-9

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Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE CA 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; BOGUSLAVSKII, E. G. ET AL: "ESR study of copper (II) complexes with substituted thioureas" retrieved from STN Database accession no. 94:40629 XP002218071 abstract -&amp; IZVESTIJA SIBIRSKOGO OTDELENIJA AKADEMII NAUK SSSR, SERIJA CHIMICESKICH NAUK, no. 5, 1980, pages 50-53, XP001106290 ISSN: 0002-3426</p>	1,3,7-9
X	<p>PETTY, RANDALL H. ET AL: "Cytochrome oxidase models. 2. .mu.-Bipyrimidyl mixed-metal complexes as synthetic models for the iron/ copper binuclear active site of cytochrome oxidase" JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, AMERICAN CHEMICAL SOCIETY, US, vol. 102, no. 2, 16 January 1980 (1980-01-16), pages 611-620, XP002218070 ISSN: 0002-7863 page 613, column 1, line 12</p>	1-3,7-9
X	<p>MAROV, I. N. ET AL: "EPR study of the formation of adducts of copper (II) chelates with organic bases" RUSSIAN JOURNAL OF INORGANIC CHEMISTRY, CONSULTANTS BUREAU, US, vol. 23, no. 10, 1978, pages 1495-1501, XP001106118 ISSN: 1070-4280 figure 4</p>	1-3,7-9
X	<p>HAIDER, S. Z. ET AL: "Copper complexes of the derivatives of 2,4-pentanedione" JOURNAL OF THE BANGLADESH ACADEMY OF SCIENCES, vol. 1, no. 2, 1977, pages 53-62, XP001105570 ISSN: 0378-8121 table 1</p>	1-3,7-9

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KWIATKOWSKI, EDMUND: "Calculation of formation constants for 1:1 complexes from spectrophotometric data" JOURNAL OF INORGANIC AND NUCLEAR CHEMISTRY, PERGAMON PRESS LIMITED, OXFORD, GB, vol. 39, no. 9, 1977, pages 1611-1613, XP001106399 tables 1,3	1-3,7-9
X	LODZINSKA, ALICJA ET AL: "X-ray and luminescence spectral investigation of chelates of zinc(II) and some other transition metals with beta.-diketones of the R-CO-CH2-CO-R' type" ROCZNIKI CHEMII, ANNALES SOCIETATIS - CHIMICAE POLONORUM, vol. 51, no. 3, 1977, pages 425-432, XP001117460 page 431, line 9	1-3,7-9
X	DD 121 525 A (WAIBLINGER) 5 August 1976 (1976-08-05) table 1	1-3,7-9
A	TAMURA, HIROSHI ET AL: "DNA binding and cleaving activity of antitumor metal complex: sodium trans-dinitrobis(2,4-pentanedionato)cobalt (III)" CHEMISTRY LETTERS, CHEMICAL SOCIETY OF JAPAN, TOKYO, JP, no. 8, 1997, pages 711-712, XP001106300 the whole document	1-10
A	WO 90 06749 A (BYK GULDEN LOMBERG CHEMISCHE FABRIK GMBH) 28 June 1990 (1990-06-28) the whole document	1-4,7-10

Continuation of I.2

Claims: 1-3 (all in part)

The search initially yielded a very large number of documents detrimental to novelty. This number is so large that it becomes impossible to determine a subject matter in any of the claims for which protection might justifiably be sought (PCT Article 6). For these reasons a meaningful search covering the full range of the application appears impossible. The search was therefore limited to the subject matter of Claims 4-6 and to the use of the compounds (Claim 10).

Furthermore, the subject of Claim 2 is inconsistent with that of Claim 1 because the definition of D as diethyldithiocarbamine is not encompassed by the definition given in Claim 1 (beta-diketone). Compounds in which D is diethyldithiocarbamine were therefore not searched.

The applicant is advised that claims or parts of claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (PCT Rule 66.1(e)). In its capacity as International Preliminary Examining Authority the EPO generally will not carry out a preliminary examination for subjects that have not been searched. This also applies to cases where the claims were amended after receipt of the international search report (PCT Article 19) or where the applicant submits new claims in the course of the procedure under PCT Chapter II.